### (12) INTERNATIONAL APPLICATION PUBLISHED UNDER THE PATENT COOPERATION TREATY (PCT)

# (19) World Intellectual Property Organization International Bureau





### (43) International Publication Date 4 November 2004 (04.11.2004)

### **PCT**

## (10) International Publication Number WO 2004/094612 A2

(51) International Patent Classification7:

C12N

(21) International Application Number:

PCT/US2004/012568

(22) International Filing Date: 22 April 2004 (22.04.2004)

(25) Filing Language:

English

(26) Publication Language:

English

(30) Priority Data: 60/464,350

22 April 2003 (22.04.2003) US

- (71) Applicant (for all designated States except US): A & G PHARMACEUTICAL, INC. [US/US]; 9130 Red Branch Road, Suite U, Columbia, MD 21045 (US).
- (72) Inventors; and
- (75) Inventors/Applicants (for US only): SUN, Le [US/US]; 10239 Threadneedle Ct., Ellicott City, MD 21042, Suite

U/V, Columbia, MD 21045 (US). SERRERO, Ginette [US/US]; 10200 Savoy Ct., Ellicott City, MD 21045 (US). CORVERA, Joe [US/US]; 3729 Yolanda Road, Baltimore, MD 21218 (US). HOU, Yodong [US/US]; 3514 Beech Avenue, Apt. F., Baltimore, MD 21211 (US).

- (74) Agent: LI, Kening; Crowell & Moring, LLP, Intellectual Property Group, P.O. Box 14300, Washington, DC 20044-4300 (US).
- (81) Designated States (unless otherwise indicated, for every kind of national protection available): AE, AG, AL, AM, AT, AU, AZ, BA, BB, BG, BR, BW, BY, BZ, CA, CH, CN, CO, CR, CU, CZ, DE, DK, DM, DZ, EC, EE, EG, ES, FI, GB, GD, GE, GH, GM, HR, HU, ID, IL, IN, IS, JP, KE, KG, KP, KR, KZ, LC, LK, LR, LS, LT, LU, LV, MA, MD, MG, MK, MN, MW, MX, MZ, NA, NI, NO, NZ, OM, PG, PH, PL, PT, RO, RU, SC, SD, SE, SG, SK, SL, SY, TJ, TM, TN, TR, TT, TZ, UA, UG, US, UZ, VC, VN, YU, ZA, ZM, ZW.

[Continued on next page]

### (54) Title: CANCER SPECIFIC MONOCLONAL ANTIBODIES



Breast cancer



Bladder cancer



Pancreas cancer

(57) Abstract: Novel monoclonal antibodies and binding fragments thereof specific to human breast cancer, lung cancer, colon cancer and other cancers. The monoclonal antibody does not bind to the cell surface of normal human tissues. The corresponding cancer-specific antigen or antigens with an apparent molecular weight of 40-52 130-200 kDa and polynucleotides encoding the antigen and the CDR regions of the antibody are also disclosed, as well as methods for diagnosis, prognosis and treatment of human breast cancer. The antibodies have tumor specificity and are useful for therapy, diagnosis, monitoring, detecting and imaging of cancers. The antibody-recognized cancer-specific surface antigens can serve as targets for detecting, diagnosing, inhibiting or killing cancer cells.

#### 

(84) Designated States (unless otherwise indicated, for every kind of regional protection available): ARIPO (BW, GH, GM, KE, LS, MW, MZ, SD, SL, SZ, TZ, UG, ZM, ZW), Eurasian (AM, AZ, BY, KG, KZ, MD, RU, TJ, TM), European (AT, BE, BG, CH, CY, CZ, DE, DK, EE, ES, FI, FR, GB, GR, HU, IE, IT, LU, MC, NL, PL, PT, RO, SE, SI, SK, TR), OAPI (BF, BJ, CF, CG, CI, CM, GA, GN, GQ, GW, ML, MR, NE, SN, TD, TG).

### Published:

 without international search report and to be republished upon receipt of that report

For two-letter codes and other abbreviations, refer to the "Guidance Notes on Codes and Abbreviations" appearing at the beginning of each regular issue of the PCT Gazette.